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SITE HEALTH and SAFETY PLAN
For
SCRAP IRON REMOVAL

at

Berlinsky Scrap Corp.
212 Page Avenue
Joliet, Illinois

Prepared for
Nicor Gas

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ACRONYMS

CFR -	Codes of Federal Regulations
Hg -	Mercury
HSP -	Health and Safety Plan
IDLH -	Immediate Danger to Life and Health
IEPA -	Illinois Environmental Protection Agency
J.U.L.I.E.-	Joint Utility Locating Information for Excavators
mg/cu m -	Milligrams per cubic meter
OSHA -	Occupational Health and Safety Administration
PPE -	Personnel Protective Equipment
SOP -	Standard Operating Procedure
STEL -	Short Term Exposure Limit
TACO -	Tiered Approach to Cleanup Objectives
TLV -	Threshold Limit Value
TWA -	Time Weighted Average
U.S. EPA -	United States Environmental Protection Agency

1. INTRODUCTION

1.1 Background Information

Nicor Gas received an Administrative Order from the U.S. EPA regarding the discovery of mercury type natural gas regulators at Berlinsky Scrap Corp., Joliet, Illinois. This Health & Safety Plan was prepared as a requirement of this Administrative Order to respond to the mercury concerns at this facility.

1.2 Site Description

Berlinsky is located at 212 Page Avenue, Joliet, Illinois. Figure 1 depicts the site on a USGS topographic map. The site is located in a commercial/residential area. West of the facility, across Page Avenue is a commercial area. South of the site, across Rte. 30 is a commercial area.

1.3 Scope of Work

The scope of work consists of removing the scrap iron piles which contain the subject gas regulators into rolloff boxes for off site disposal, followed by soil screening with a Jerome Meter, soil removal and confirmation sampling, if necessary.

1.4 Exposure Limits

The routes of exposure associated with mercury are ingestion and inhalation. The vapor pressure of mercury is relatively low, 0.0012 mm Hg at 25°C. Exposure can occur from both inhalation of the vapors as well as ingestion of dust particles. The recommended NIOSH exposure limits for mercury is:

TWA – (8 hr); 0.025 mg/cu m

In addition, OSHA has a ceiling exposure limit of 0.100 mg/cu m for mercury. The portable Jerome Meter is calibrated to directly read the mercury vapor concentration in the sample or atmosphere. If the recommended NIOSH limit 0.025 mg/cu m in the breathing zone is exceeded, then the level of protection used will be upgraded from Level D to Level C. Some activities will automatically be done in Level C. If the mercury concentration is above 1.25 mg/cu m, PPE will be upgraded to Level B.

1.5 General Site Safety Guidelines

The health and safety protocols established in this plan are based on the site conditions and chemical hazards known and/or anticipated to be present from the available site data.

FIGURE 1
SITE LOCATION MAP
BERLINSKY SCRAP CORP.
JOLIET, ILLINOIS

NORTH

2000' 0 2000'

SOURCE: UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
JOLIET, ILLINOIS QUADRANGLE

The following Health and Safety Plan (HSP) is intended solely for use during the proposed activities. Specifications herein are subject to review and revision based on actual conditions encountered in the field during site characterization activities.

Before site operations begin, all employees involved in these operations will have read and understood this Health and Safety Plan and all revisions made. The activities include loading scrap iron into rolloff boxes, and possibly screening the soil, soil removal, and collecting confirmation soil samples. A sign in sheet is included in Appendix A.

2. SITE HEALTH AND SAFETY MANAGER

The Site Health and Safety Manager will be responsible for the health and safety of workers on the site including the contractors. She will require that all personnel entering the site read this Health and Safety Plan and acknowledge in writing that they understand the contents of the Health and Safety Plan. This Manager will also ensure that the Health and Safety Plan is adhered to, decide when to change levels of protection, and, if necessary, to shut down operations. The personnel on-site will include the Health and Safety Manager, and other Huff & Huff employees and Heritage Environmental employees. Should the Health and Safety Manager become incapacitated or absent in anyway, the Project Manager shall be in charge of Health and Safety.

3. STANDARD OPERATING PROCEDURES

- Eating, drinking, chewing gum, tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated contaminated.
- Hands and face must be thoroughly washed prior to leaving the site.
- Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.
- No facial hair which interferes with a satisfactory fit of the mask-to-face-seal is allowed on personnel required to wear respirators.
- Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit, or place equipment on drums, containers, or the ground.
- Medicine and alcohol can potentiate the effects from exposure to toxic chemical. Prescribed drugs should not be taken by personnel at hazardous waste operations where the potential for absorption, inhalation, or ingestion of toxic substances exist unless specifically approved by a qualified physician. Alcoholic beverage intake is prohibited.
- All personnel must be familiar with standard operating safety procedures and any additional instructions and information contained in the Health and Safety Plan.
- All personnel must adhere to the information contained in the Health and Safety Plan.
- Contact lenses cannot be worn when respirator protection is required or when the hazard of a splash exists.
- Personnel will be aware of symptoms for toxic chemicals on site and for heat and cold stress.
- All personnel will have available air purifying respirators for elemental mercury.
- Respirators shall be clean and disinfected after each day's use or more often if necessary.
- Prior to donning, respirators will be inspected for worn or deteriorated parts.
- The employee will be familiar with all sections of the established respirator program.
- Contractors and Huff & Huff personnel will review standard communications for operating and emergency conditions.
- Disposable foot wear shall be worn by all workers entering the sorting area until remediation is deemed complete.

4. OPERATIONS

- All personnel going on-site into the sorting area must be adequately trained (OSHA 40 hour) and thoroughly briefed on anticipated hazards, equipment to be worn, safety practices to be followed, emergency procedures, and communications.

- Any required respiratory protective devices and clothing must be worn by all personnel going into areas designated for wearing protective equipment.

- Personnel on-site must use the buddy system when wearing respiratory protect equipment.

- During continual operations, on-site workers act as safety backup to each other. Off-site personnel provide emergency assistance.

- Entrance and exit locations must be designated and emergency escape routes delineated.

- Work areas for various operational activities must be established.

- Procedures for leaving a sorting zone must be planned and implemented prior to going on-site. Work areas and decontamination procedures must be established based on expected site conditions. A separate decontamination station for equipment and for personnel will be established.

- Frequent and regular inspections of site operations will be conducted to insure compliance with the Health and Safety Plan. If any changes in operation occur, the Health and Safety Plan must be modified to reflect changes.

5. EMPLOYEE TRAINING

All operational employees participate in routine health and safety education and training programs. These programs are designed to provide these employees with a thorough knowledge of hazardous materials, health, and safety hazard potentials and compliance with federal OSHA 29 CFR 1910.120(e): 40 hours initial instruction, 8 hours refresher training, supervisor's additional 8 hours specialized training, and EPA requirements. Current training certificates for the Health and Safety Manager and Principal are included in Appendix B. Contractors are also provided with 40 hours of initial instruction and 8 hours refresher training. As a minimum, this training includes the following:

- General Safety Rules
- Basics of Chemistry
- Basics of Toxicology/Physiology
- Hazardous Materials (types/characteristics)
- Hazard Communication Information
- Respiratory Protection
- Respirator Training
- Chemical Protective Clothing
- Decontamination Procedures/Personal Hygiene
- Fire Prevention/Protection
- First Aid/CPR
- Confined Space Work/Safety
- Atmospheric Testing/Sampling Procedures
- Emergency Response Procedures
- Electrical Hazard
- Federal and State Regulations

6. PHYSICAL AND CHEMICAL HAZARDS ON-SITE

6.1 Physical Hazards

From the information available, there are no identified immediate hazards regarding fire, explosion, airborne contaminants, radiation, and oxygen deficient atmospheres.

Site activities include loading scrap iron into rolloff boxes, hand picking debris, and possibly soil screening, soil removal, and sample collection. These operations present certain physical hazards, such as being struck by heavy objects or dangers due to moving machinery. Hard hats and safety glasses will be required for personnel on site.

6.2 Chemical Hazards

Chemical hazards involve potential exposure to the compounds found at the site. The compound identified as being present at the site is elemental mercury.

The Hazardous Chemical Data Sheets for mercury listing the chemical properties, signs and symptoms of exposure to these contaminants, IDLH's (10 mg/cu m), TLVs 0.025 mg/cu m), and first aid procedures to implement in the event of exposure, are included for reference in the Appendix C.

6.3 Utility Hazards

The underground utility companies will be contacted through J.U.L.I.E. The utility companies will mark the utilities before subsurface work is conducted. The utility companies mark according to the following color code:

Electric	Red
Telephone	Orange
Water	Blue
Gas	Yellow

The line marked by the utility companies is normally within 24" of the marked line. Additional utilities may still be present that are maintained by companies not contacted by J.U.L.I.E.

The telephone numbers for the repair of natural gas and electric line crews are indicated below:

Nicor	1(630) 983-8676
Commonwealth Edison	1-(800)-334-7661

7. MEDICAL SURVEILLANCE

7.1 Medical Examinations

Huff & Huff personnel participates in a medical examination program that includes a physical examination once per year. The physical exam includes a respiratory examination to determine physical fitness to wear respiratory equipment. The physical examination tests includes blood, urinalysis, cardio-pulmonary, hearing, and vision. The contractors medical program must be similar to the Huff & Huff medical program. All programs follow the requirements of 29 CFR 1910.120(f). Employees have been made aware that the medical records are accessible. Huff & Huff employees are mailed a copy of the record following the examination. The Contractor, Heritage, has a similar program, as described in their Health & Safety Plan contained in Appendix A. In addition, both Huff & Huff and Heritage employees have been tested for mercury blood levels before initiating the scrap yard removal projects, and will be tested upon conclusion of all such work for Nicor Gas.

7.2 Personnel Protective Equipment

Personnel protection equipment is a very important consideration in any site investigation which involves or may involve hazardous working conditions. Given the preliminary information concerning the site, modified Level D protection (Level C minus respirator) will be implemented.

Disposable booties will be worn by all workers entering the exclusion zone. A Jerome Meter will be used to measure mercury levels in the breathing zone. If mercury levels in the exclusion zone exceed 0.025 mg/cu m, Level C PPE will be required.

The following personal protective equipment will be required:

- Boots - Steel toe
- Hard hat
- Gloves (outer & latex inner)
- Company issued and cleaned work clothes
- Disposable outer booties
- Safety glasses

The following will be available:

- Full or partial face respirators (mercury cartridges)
- Tyvek suits

The Health and Safety Officer will decide on appropriate personal protection equipment to be worn and he/she will have the discretionary power to upgrade personal protection as appropriate. Failure to wear personal protection equipment required by the health and safety officer can be cause for suspension of a worker from the site.

8. DECONTAMINATION PROCEDURES

Decontamination of personnel protective equipment (PPE) Level D is as follows:

1. Remove outer boots discard in PPE drum
2. Hard hats should be free of soil and debris
3. Remove Tyvek outer gloves and dispose of in PPE drum
4. Wash hands and face before leaving site
5. Work clothes to be sent to commercial/industrial laundry service.

A personnel decontamination station will be located outside the sorting area.

The decontamination procedures for sampling equipment consists primarily of a tap water Alconox wash and scrub followed by tap water rinse, mercury cleaning solution wash, tap water rinse followed by a deionized water spray rinse and air drying. Heavy equipment (backhoe bucket and crane magnet) will be washed the mercury cleaning solution. Literature about the decon solution is contained in Appendix D. Protective suits, gloves, respirator cartridges, tape (if utilized) will be placed in containers for proper disposal at the end of the operations as low level mercury hazardous waste. Site personnel will be required to wash their face and hands prior to each site exit. Soiled clothing will be removed and sent to a commercial/industrial laundry service.

Rinsate will be generated from decontamination of the heavy equipment as well as sampling equipment. This rinsate will be captured and drummed for proper disposal.

8.1 Work Zones

The scope of work calls for sorting through the scrap metal pile. As a general rule, regulators are pulled out of the pile by site employees when loads of scrap are dumped. Therefore it is not anticipated that many mercury regulators will be uncovered during the sorting process. A work zone/sorting zone will be established. If mercury regulators are discovered, an exclusion zone will be established.

There are also two or three bins which contain regulators on the north side of the site. Mercury levels will be recorded inside the bins. If any readings are above 0.025 mg/cu m respirators will be worn while removing the regulators from the bins.

8.2 Decontamination During Medical Emergencies

Decontamination procedures for injured personnel is an important consideration in ensuring the health of site workers. Improper decontamination may aggravate or cause more serious health effects. In the event that a life-threatening situation occurs, decontamination procedures will be omitted and prompt life-saving first aid and medical attention will be administered. Measures to be taken in a life-threatening physical injury include:

1. Contact the Health and Safety Officer immediately.

2. Remove outer garments (depending on the weather) if they do not cause delays, interfere with treatment, or aggravate the problem. Full-encapsulating and chemical resistant suits can be cut away.

3. If the outer contaminated garments cannot be safely removed, wrap the individual in plastic, rubber or blankets to help prevent contaminating the inside of ambulances and medical personnel.

4. No attempt should be made to wash or rinse the victim at the site. The one exception to this would be, if it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause sever injury or loss of life.

In the event of minor physical problems or injuries, e.g., sprained ankle, cuts, etc., normal decontamination procedures should be followed.

Heat related emergencies and chemical injury are two of the more common medical problems on site investigations. It should be remembered that heat stroke requires prompt treatment to prevent irreversible damage or death.

Heat exposure becomes dangerous when the body can no longer regulate the bodies core temperature. The heat related illnesses may occur in sequence, starting with Heat Rash and progress into a more severe case or go straight to Heat Stroke. The following is a summary of the symptoms and care related to each of the heat illnesses.

Heat Rash - effects the skin and feels like prickly heat.

Signs and Symptoms:
1. Skin Rash
2. Tingling or prickling sensation on the skin.

Emergency Care:
1. Shower
2. Dry Skin Thoroughly
3. Change undergarments as needed
4. Stay in cool place
5. Avoid repeated heat exposure.

Heat Cramps - muscle pains, usually in lower extremities, abdomen, or both.

Signs and Symptoms:

1. Cramps in lower extremities or abdomen. Cramps come on suddenly and can be mild with only slight cramping. Cramps are more commonly incapacitating and intense pain.
2. Increased respiratory rate
3. Increased pulse rate
4. Pale and moist skin
5. Normal body temperature
6. Loss of consciousness
7. Generalized weakness

Emergency Care:

1. Move the worker to a cool environment. Have him lie down if he feels faint.

2. If the worker is not nauseated he may be given 1 or 2 glasses of an electrolyte solution. Have the worker drink slowly. The use of salt tablets is not recommended, as they may precipitate nausea.

3. If the worker is nauseated avoid giving anything by mouth until the nausea subsides.

4. Avoid massaging the cramping muscles. This rarely helps and may actually aggravate the pain.

5. As the salt and water level is replenished, the worker's pain will subside. He may wish to return to work, however this is NOT recommended for a period of 12 hours. Further exertion may lead to heat exhaustion or heat stroke.

Heat Exhaustion - more severe response to loss of salt and water.

Signs and Symptoms:

1. Heat Exhaustion may come on suddenly and collapse, or may be present with a headache, fatigue, dizziness, nausea with occasional abdominal cramping.

2. Sweating will be profuse.

3. Pulse rate will be rapid and weak

4. Respiration rate will be rapid and shallow.

5. The skin will be pale and clammy.

6. The body temperature will be normal or decreased.

7. The worker could be irritable and restless.

8. Monitor the worker's level of consciousness and airway.

Emergency Care:

1. Move the worker to a cool environment, take off as much of his clothing as possible, place him in a supine position with his legs elevated.

2. Sponge the worker with cool water. If you fan the worker, avoid chilling. When the body chills, the muscle generate energy. When the body shivers, this energy is released in the form of heat and actually can increase the body temperature.

3. If this is a true medical emergency, prompt intervention by Emergency Medical Services is recommended.

Heat Stroke - Heat stroke is caused by a severe disturbance in the body's heat-regulating mechanism and is a profound emergency, with a mortality rate ranging from 25 to 50 percent. It is most common in men over 40, especially in alcoholics. It can also occur in people of any age having too much exposure to the sun or prolonged confinement in a hot atmosphere. Heat stroke comes on suddenly. As the sweating mechanism fails, the body temperature begins to rise precipitously, reaching 106°F (41° C) or higher within 10 to 15 minutes. If the situation is not corrected rapidly, the body cells--especially the very vulnerable cells of the brain--are literally cooked, and irreversible central nervous system damage occurs.

The treatment for Heat Stroke is aimed at maintaining vital functions and causing as rapid a temperature fall as possible.

Signs and Symptoms:

1. The worker's pulse will be strong and bounding.

2. The skin will be hot, dry and flushed.

3. The worker may experience headache, dizziness, and dryness of mouth.

4. Seizures and coma occur.

5. Loss of consciousness and airway maintenance problems can occur.

Emergency Care:

1. Establish an open airway.

2. Move the worker to a cool environment. Take off as much clothing as possible, place him in a semi-reclining position with the head elevated.

3. Use any means to cool the worker. Improvise with whatever is available. A bathtub filled

with cold water and ice cubes is an idea. Remember, speed is essential; delay may result in permanent brain damage. Vigorous efforts to cool the worker must continue until the body is below 102°F (38.9°C).

4. This is a true medical emergency, prompt intervention by Emergency Medical Services is recommended.

These are only guidelines for the care of Heat Related Emergencies. Actual training in emergency medical care or basic first aid is recommended.

Chemical Exposure - Chemical exposure symptoms will vary depending upon the chemical of concern. The chemical exposure guidelines and symptoms are presented in the table in the attachments for mercury.

In the event of chemical exposure, the following general measures should be taken:

1. Contact the Health and Safety Officer immediately.
2. For inhaled contaminants, seek immediate medical attention.
3. For contamination of the skin and eyes, use water to flush the affected area.
4. Unless severe medical problems occur, simultaneously with splashes, the protective clothing should be washed off as rapidly as possible and carefully removed.

The aforementioned information on decontamination is a general guideline to follow. Each medical emergency is unique and it is up to the discretion of the Health and Safety Officer and site personnel to act appropriately given the situation. In the event of any exposure, the Health and Safety Officer should be contacted.

In the event it becomes necessary to transport a victim to the hospital, a map with directions is given in Figure 8-1. The directions are as follows:

Exit the site and go left (south) on Page.
Turn right (west) on Rt. 30 (Cass).
Turn right (north) on Maple
Turn right (east) on Rt. 6 (Maple).
Silver Cross Hospital is at the corner of Rt. 6 and Walnut.

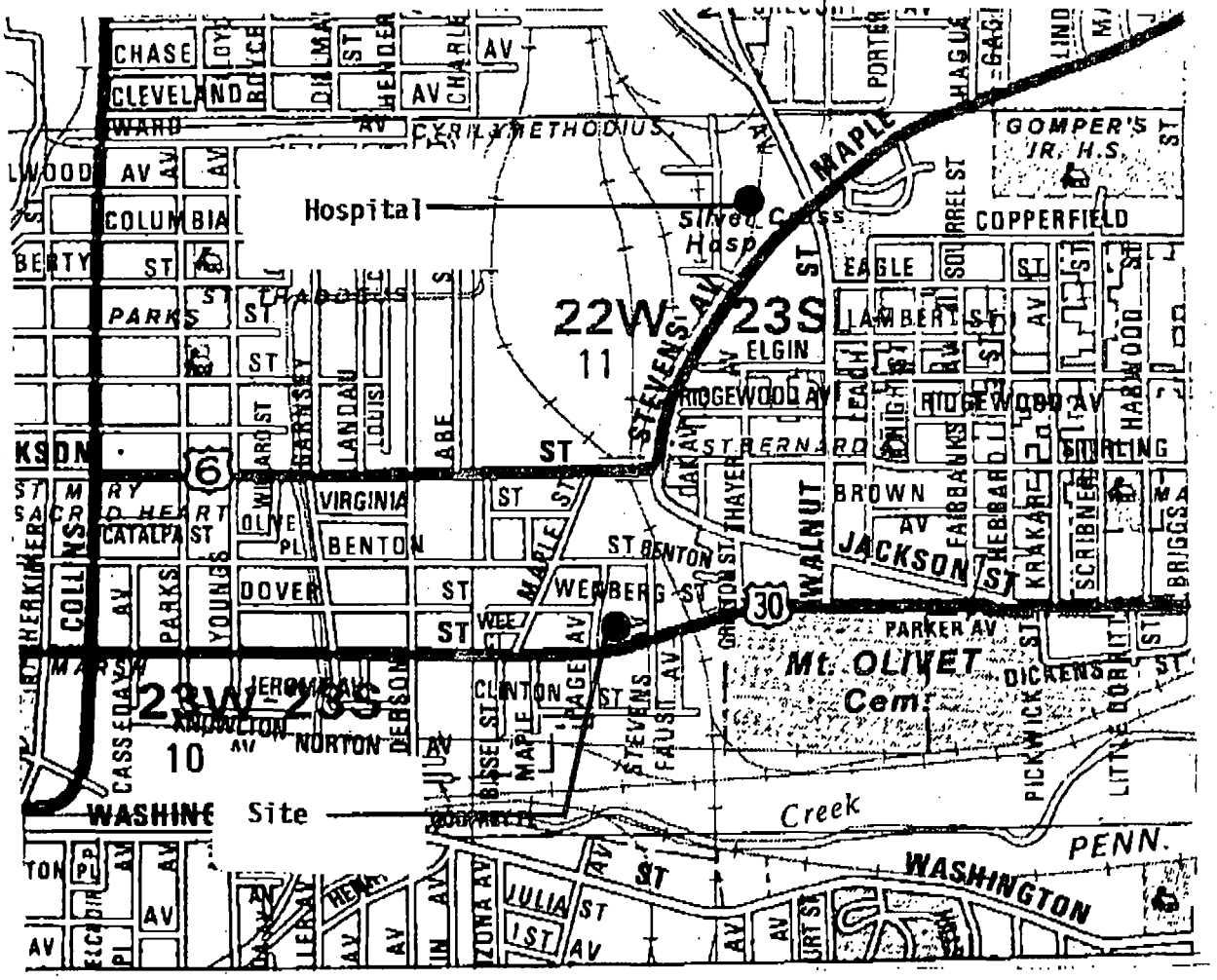

Figure 8-1
Hospital Location
Berlinsky Scrap Corp.

9. EMERGENCY RESPONSE

Personal medical records for Huff & Huff employees can be obtained from:

Occupational Health Services
Executive Clinic
222 East Ogden Avenue
Hinsdale, IL 60521
Phone: (708) 887-6133
Emergency Phone: (708)887-6133

The following phone list presents the emergency phone numbers:

Ambulance	911
Joliet Fire Department	911
Non-Emergency	815-724-3280
Joliet Police Department	911
Non-Emergency	815-724-3100
Silver Cross Hospital	815-740-1100
Poison Control Center	1-800-942-5969
Illinois Emergency Management Service	1-217-782-7860
IEPA-Emergency Response Unit	1-800-782-7860
Huff & Huff, Inc.	1-708-579-5940

First aid kits, which meet the requirements of 29 CFR 1926.50, will be accessible to all personnel associated with this project. The first aid kit shall consist of a waterproof container with individual sealed packages for each item. The contents will be checked before being sent out to the job site. This will be located in the Site Health and Safety Officer's vehicle. Remaining personnel will be identified upon selection of a Contractor.

10. AIR MONITORING

A portable Jerome meter with air filter will be used to record mercury readings on the work zone every hour. If the mercury level is below 0.025 mg/m^3, no respirators will be required.

If mercury readings are between 0.026 mg/m^3 and 0.124 mg/m^3 Level C PPE will be worn. If mercury levels are above 1.25 mg/m^3 PPE will be upgraded to Level B. An example of the log sheet used to record Jerome readings is included in Appendix E.

In addition employees on site will wear passive mercury badges to monitor each workers exposure level. Information on these badges can be found in Appendix F.

If mercury levels are above 0.0125 mg/cu m, Berlinsky employees will be notified so they can take proper precaution.